

NOV 08 2006

Serial No. 09/680,608

PATENT  
Docket No. 78700.020115REMARKS

In this response, new claims 61-64 have been added, and no claims have been canceled. Accordingly, claims 1-16 and 19-64 are now pending. The Office Action issued by the Examiner has been carefully considered.

Claims 1-60 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Chou et al. (U.S. Patent No. 6,330,499) and Spaur et al. (U.S. Patent No. 5,732,074).

Applicant's independent claim 1 recites "the RTIP performing real-time operations and the application processor performing high-level processing functions" (emphasis added). In the current Office Action, the Examiner has newly argued, in response to Applicant's prior position regarding this recited use of two processors, that Chou discloses a processor 300 that may be coupled to communicate with "external devices" 360 such as a printer or fax, and that optionally the processor 300 may be coupled to a location sensing device such as a GPS receiver 317 (col. 3, lines 49-58). The Examiner further has argued that Chou discloses "other computing devices" such as a laptop or PDA that may perform the function of the processor 300 (col. 3, lines 63-67).

Applicant best understands the Examiner's argument to be that the above "other computing devices" describes a "real-time interface processor" as recited by Applicant. Chou describes that external devices 360 communicating with processor 300 may include a notebook computer or PDA (col. 3, lines 49-53). Accordingly, Applicant further understands the Examiner's argument to be that external device 360 (e.g., a laptop) may perform the function of the processor 300.

As a first matter, Chou is describing the laptop as replacing the processor 300—Chou does not describe any separation of function in which one processor performs "real-time operations" and another processor performs "high-level processing functions", each as recited by Applicant's claim 1. Thus, use of the laptop instead of processor 300 would merely move the processing functionality in its totality from processor 300 to the laptop. Chou does not suggest any division of processing functions, and does not describe any criteria for making any such division. Further, the secondary reference, Spaur, does not provide any of these missing teachings.

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Furthermore, Applicant's independent claim 1 has been amended to recite that "the RTIP couples the application processor to a vehicle bus and to an external network". Chou's Fig. 3 shows a vehicle bus 140 coupled to client computer device 101 by vehicle bus interface 120. Fig. 3 also shows a remote service center 200 coupled to client computer device 101. If, for the sake of argument, vehicle bus interface 120 were considered by the Examiner to be an RTIP, it should be noted that interface 120 does not couple client computer device 101 to remote service center 200. Yet, Applicant's claim 1 recites the RTIP coupling the application processor to an external network. Chou's Fig. 3 shows interface 120 coupled to vehicle bus 140, not to remote service center 200. Therefore, Applicant's claim 1 is believed allowable for at least this reason.

In addition, also see Chou's Fig. 2 in which vehicle bus interface 330 couples vehicle bus 335 to processor 300. Processor 300, which Chou describes as performing high-level functions, is shown as directly coupled to network interface 320 and external devices 360. In other words, vehicle bus interface 330 does not couple processor 300 to both vehicle bus 335 and to network interface 320. Furthermore, Chou's selection of name for the "vehicle bus" interface 330 would suggest to one skilled in the art to use interface 330 only for coupling to a vehicle bus.

The Examiner also argues that Chou discloses "the diagnostic server places the request on a job queue for the call center to process . . ." and that this somehow is related to a gateway node that comprises an RTIP and an application processor. However, Chou clearly describes the diagnostic server as being separate from the vehicle (i.e., not "in the vehicle" as recited by Applicant). Further, the Examiner's argument here does not suggest any preference of allocation of processing between real-time operations using an RTIP and high-level processing functions using an application processor. The Examiner's new arguments don't even explain how such an allocation may be implied by Chou. Indeed, Applicant respectfully submits that the relevance of this new argument is not adequately presented to support a prima facie case of obviousness.

Applicant's independent claim 42 also recites that "the RTIP couples the application processor to a vehicle bus and to an external network" and is believed allowable for at least the reasons discussed above.

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Applicant's independent claim 49 recites that "the gateway node of the vehicle comprises at least one real-time interface processor (RTIP) and at least one application processor, the RTIP performing real-time operations and the application processor performing high-level processing functions". An obviousness rejection requires that there be some teaching or suggestion in the prior art, which the Examiner has a duty to set forth in a clear manner, in order to make a prima facie case of obviousness. The Examiner has cited Chou at col. 8, lines 34-51, which describes the operation of the remote service center. The remote service center is not in the vehicle as required by Applicant's claim 49. Instead, Chou describes the use of, for example, a wireless phone (col. 3, lines 15-21).

As was mentioned above, Chou describes a client computer device 101 that communicates to the remote service center 200 by means of the network interface 107 (col. 4, lines 7-14; col. 4, lines 39-41; and Fig. 3). Chou also describes that the client computer device 101 performs several functions (col. 4, lines 39-40) and manages the state of active requests and vehicle status, among other functions (col. 4, lines 58-61). However, Chou does not describe the use of two or more processors in the gateway node with one processor performing real-time operations and the other processor performing high-level processing functions. The Examiner has not presented a clear prima facie case or any argument that supports any such teaching or suggestion by Chou.

The Examiner has also cited Spaur (col. 8, lines 7-23), which describes a controller 30 for providing communication protocols in association with the Internet (col. 8, lines 24-27). Spaur here teaches that controller 30 is preferably a single microprocessor that performs multiple tasks using a real time operating system. For example, one of these tasks is I/O management. However, Spaur does not teach or suggest the performing in a gateway node of real-time operations on a first processor and the performing of high-level processing functions on a second processor.

Accordingly, even if controller 30 of Spaur were incorporated into the system of Chou, a person of skill in the art would still at most only use a single processor as there is no suggestion in either Chou or Spaur to do otherwise. Furthermore, for the sake of argument, even if a person of skill in the art were to use two processors in the system of Chou, there is no suggestion in

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either Chou or Spaur to do real-time operations on the first of such processors and high-level processing functions on the second. The Examiner has argued that Spaur teaches performance of multiple tasks, but has not presented any argument as to how Spaur can be considered to teach the use of two processors for the performance of such multiple tasks.

Applicant's independent claim 56 recites "the RTIP predominantly performing real-time operations and the application processor predominantly performing high-level processing functions, wherein the RTIP is coupled to provide information received from at least one of the vehicle elements to the application processor". Chou's Fig. 3 illustrates a client computer device 101 and a vehicle bus interface 120. However, Chou does not describe any preferred predominant allocation of processing functions between device 101 and interface 120 that is related to "real-time operations" and "high-level processing functions" as recited by Applicant's claim 56.

Applicant's independent claim 57 recites "automatically providing secure interoperability among the plurality of nodes of the at least one vehicle internetwork and the at least one peripheral electronic device in response to node information including configuration and security information." When previously discussing Applicant's claim 1, the Examiner cited col. 1, lines 53-64, of Chou regarding providing secure interoperability. Applicant's claim 57 recites providing secure interoperability to a peripheral electronic device. In contrast, the Examiner's cited section of Chou describes the extraction of information from a vehicle's monitoring systems, its transfer to a remote service center for processing, and an information reply from the remote service center to the driver. There is no mention here in Chou of providing secure interoperability to a peripheral electronic device of a vehicle internetwork.

Chou also does not mention here that any secure interoperability is provided in response to configuration and security information. Instead, Chou merely describes the sending of information from the vehicle's monitoring system.

The Examiner has also cited Chou at col. 3, lines 16-32, as teaching using node information including configuration and security information to provide secure interoperability to at least one peripheral electronic device. Chou here describes that processor 300 of the vehicle is integrated with a network interface 320 to provide communication capability with the

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remote service center 200. Chou further describes that the network interface preferably comprises a wireless telephone and discusses related data communication aspects of the telephone. Yet, this cited section does not discuss providing secure interoperability to a peripheral electronic device.

Other sections of Chou discuss, for example, the detection of diagnostic trouble codes generated by the vehicle's electronic control units 103 (col. 6, lines 55-57). However, Chou does not teach or suggest automatically providing secure interoperability to at least one peripheral electronic device in response to node information including configuration and security information.

Further, Spaur does not teach or suggest this automatically providing secure interoperability. For example, Spaur at col. 10, lines 50-55, describes that in operatively connecting a controller area network (CAN) bus 126 to each vehicle device 50a-50n, each of these vehicle devices is operatively associated with a CAN interface, and that in one embodiment, each of the CAN interfaces is connected in "daisy-chain" fashion as part of the bus 126 configuration. However, the Examiner has not clearly argued how Spaur teaches here that secure interoperability is provided in response to configuration and security information. Therefore, claim 57 is believed allowable over Chou and Spaur.

Applicant's new dependent claim 64 recites that "the RTIP couples the application processor to a vehicle bus and to an external network" and is believed allowable for at least the reasons discussed with respect to this claim language in Applicant's claim 1 above.

Applicant's other new claims 61-63 all depend, directly or indirectly, from Applicant's independent claim 56 and are believed allowable for at least the reasons discussed above.

Applicant's other pending dependent claims all depend, directly or indirectly, from Applicant's independent claims 1, 42, 49, 56, and 57, and are believed allowable for at least the reasons discussed above.

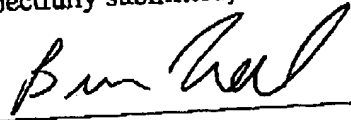
In view of the above, Applicant respectfully requests the reconsideration of this application and the allowance of all pending claims. It is respectfully submitted that the

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Examiner's rejections have been successfully traversed and that the application is now in order for allowance. Applicant believes that any of the Examiner's other arguments not explicitly discussed above are moot in light of the above arguments, but reserves the right to later address these other arguments. Accordingly, reconsideration of the application and allowance thereof is courteously solicited.

Respectfully submitted,



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